

agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 18:06:07 ON 04 JUN 2008

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.63

0.63

FILE 'CAPLUS' ENTERED AT 18:07:52 ON 04 JUN 2008

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 4 Jun 2008 VOL 148 ISS 23

FILE LAST UPDATED: 3 Jun 2008 (20080603/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=> d his

(FILE 'HOME' ENTERED AT 18:06:07 ON 04 JUN 2008)

FILE 'CAPLUS' ENTERED AT 18:07:52 ON 04 JUN 2008

=> s alpha chromium oxide

1767788 ALPHA

396562 CHROMIUM

1870232 OXIDE

L1 26 ALPHA CHROMIUM OXIDE

(ALPHA(W)CHROMIUM(W)OXIDE)

=> s l1 and crystalline

82961 CRYSTALLINE

L2 2 L1 AND CRYSTALLINE

=> d 1-2 bib abs

L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1977:182159 CAPLUS

DN 86:182159

OREF 86:28487a,28490a

TI On the preparation of finely dispersed crystalline .

alpha.-chromium oxide (α -Cr₂O₃)

AU Proinova-Mekhandzhieva, R.; Mekhandzhiev, D.
 CS Inst. Chem. Technol., Sofia, Bulg.
 SO Doklady Bolgarskoi Akademii Nauk (1976), 29(12), 1787-90
 CODEN: DBANAD; ISSN: 0366-8681

DT Journal
 LA English

AB Samples of Cr(OH)₃ with large sp. surface, obtained by precipitation from Cr(NO₃)₃ solns. with NH₃ in presence of EtOH, were heated at 200, 300, 400, and 500° with continuous blowing of N, O, and H into the reaction space or in vacuum to produce finely dispersed crystalline α -Cr₂O₃. Even at 500° the conversion of Cr(OH)₃ into Cr₂O₃ is not complete. The products obtained were characterized by magnetic susceptibility and sp. surface area detns. and x-ray diffraction. The sp. surface areas of the products obtained at different temps. in the different atms. and in vacuum are given. The samples obtained at 400° in the presence of N had a large sp. surface (160 m²/g) and was antiferromagnetic, i.e., it had the crystal structure of α -Cr₂O₃.

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1963:39547 CAPLUS
 DN 58:39547
 OREF 58:6678e-f

TI Mechanism for the dehydrogenation of cyclohexane on crystalline α -chromium oxide

AU Balandin, A. A.; Rozhdestvenskaya, I. D.
 SO Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1961) 1955-60
 CODEN: IASKA6; ISSN: 0002-3353

DT Journal
 LA Unavailable

AB The dehydrogenation of cyclohexane was studied at 330-400° on a crystalline α -Cr₂O₃ catalyst. The preparation of the catalyst, materials, and the method was described earlier (CA 56, 13594f). A comparison of the exptl. data with the theories for the mechanism of the reaction showed that the data agreed best with the planar sextet mechanism (CA 27,265; 51, 10208f). 34 references.

=> s l1 and nickel atoms
 673165 NICKEL
 559825 ATOMS
 565 NICKEL ATOMS
 (NICKEL(W)ATOMS)

L3 1 L1 AND NICKEL ATOMS

=> d bib abs

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2004:182755 CAPLUS
 DN 140:219737

TI Nickel-substituted and mixed nickel-and-cobalt-substituted chromium oxide compositions, their preparation, and their use as catalysts and catalyst precursors

IN Nappa, Mario J.; Rao, Velliyur Nott Mallikarjuna; Rosenfeld, H. David; Subramoney, Shekhar; Subramanian, Munirpallam A.; Sievert, Allen C.
 PA E.I. du Pont de Nemours and Company, USA
 SO PCT Int. Appl., 55 pp.
 CODEN: PIXXD2

DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004018095	A1	20040304	WO 2003-US26327	20030821
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003265592	A1	20040311	AU 2003-265592	20030821
	EP 1551551	A1	20050713	EP 2003-793282	20030821
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	CN 1678391	A	20051005	CN 2003-819939	20030821
	JP 2005536425	T	20051202	JP 2004-529844	20030821
	RU 2318595	C2	20080310	RU 2005-107802	20030821
	US 20050227865	A1	20051013	US 2005-523226	20050131
PRAI	US 2002-405221P	P	20020822		
	WO 2003-US26327	W	20030821		

OS CASREACT 140:219737

AB A crystalline α -chromium oxide where 0.05-2 atom % of the chromium atoms in the α -chromium oxide lattice are substituted by nickel atoms, and optionally, addnl. chromium atoms in the alpha-chromium oxide lattice are substituted by trivalent cobalt atoms (provided that the total amount of the nickel atoms and the trivalent cobalt atoms in the α -chromium oxide lattice is no more than 6 atom%) is disclosed. Also disclosed is a chromium-containing catalyst composition comprising as a chromium-containing component the crystalline substituted α -chromium oxide; and a method for preparing a composition comprising the crystalline substituted α -chromium oxide. The method comprises (a) co-precipitating a solid by adding ammonium hydroxide to an aqueous solution of a soluble divalent nickel salt, a soluble trivalent chromium salt, and optionally, a soluble divalent or trivalent cobalt salt, that contains at least three moles of nitrate per mol of chromium in the solution, has a nickel concentration 0.05-2 mol% of the total of nickel, chromium, and cobalt in the solution, and has a combined concentration of nickel and cobalt of no more than 6 mol% of the total of nickel, chromium, and cobalt in the solution; and after at least 3 mol of ammonium per mol of chromium has been added to the solution; (b) collecting the co-precipitated solid formed in (a); (c) drying the collected solid; and (d) calcining the dried solid. Also disclosed is a chromium-containing catalyst composition comprising a chromium-containing component prepared by treating said crystalline substituted -chromium oxide with a fluorinating agent; and a process for changing the fluorine distribution (i.e., content and/or arrangement) in a hydrocarbon or halogenated hydrocarbon in the presence of a catalyst. The process involves using as the catalyst a composition comprising the crystalline substituted alpha-chromium oxide and/or the treated substituted α -chromium oxide.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s chromium oxide and nickel atoms

396562 CHROMIUM
1870232 OXIDE
37001 CHROMIUM OXIDE
(CHROMIUM(W)OXIDE)
673165 NICKEL
559825 ATOMS
565 NICKEL ATOMS
(NICKEL(W)ATOMS)

L4 2 CHROMIUM OXIDE AND NICKEL ATOMS

=> d 1-2 bib abs

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2007:1256306 CAPLUS

TI Metal dusting of nickel and its alloys

AU Zhang, Jianqiang; Young, David J.

CS School of Materials Science and Engineering, University of New South
Wales, Sydney, NSW, 2052, Australia

SO ECS Transactions (2007), 3(14, High Temperature Corrosion and Materials
Chemistry 6), 27-41
CODEN: ECSTF8

PB Electrochemical Society

DT Journal; (computer optical disk)

LA English

AB Pure nickel, Ni-Cu binary alloys, Types 304 and 310 stainless steels and
Alloy 800H were all reacted with carbon-supersatd. CO/H₂/H₂O at
680°. In general, the reaction led to growth of an external
deposit, together with graphitization at both external surfaces and
interior grain boundaries. By independently controlling the supersatd.
carbon activity and pCO, the reaction of pure nickel was determined by
parallel, independent reaction paths, and the carbon uptake rate was well
described by Rate = k₁pCOpH₂ + k₂p₂CO - k₃p₂H₂ leading to a maximum rate at
about pCO .apprx. 0.7 atmospheric The surface graphite layer thickened,

growing

into the metal, while graphite particle clusters and nanofilaments formed
on the surface. Each particle cluster and filament contained metal
nanoparticles. Addition of copper to the nickel suppressed graphite particle
cluster formation, thereby decreasing greatly the overall dusting rate.
This phenomenon is interpreted in terms of graphite nucleation and copper
interference with nucleation sites involving multiple nickel
atoms. Reaction conditions used were such as to stabilize Fe₃C
and chromium carbides, Cr₂O₃ and spinel, but not iron or nickel oxides.
Under these conditions, all three alloys, 304SS, 310SS and 800H, dusted,
with 304SS experiencing the greatest metal wastage. Addns. of copper had
no effect on the dusting rate of 304SS, but greatly decreased the dusting
of 310SS and 800H.

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:182755 CAPLUS

DN 140:219737

TI Nickel-substituted and mixed nickel-and-cobalt-substituted
chromium oxide compositions, their preparation, and
their use as catalysts and catalyst precursors

IN Nappa, Mario J.; Rao, Velliyur Nott Mallikarjuna; Rosenfeld, H. David;
Subramoney, Shekhar; Subramanian, Munirpallam A.; Sievert, Allen C.

PA E.I. du Pont de Nemours and Company, USA

SO PCT Int. Appl., 55 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004018095	A1	20040304	WO 2003-US26327	20030821
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003265592	A1	20040311	AU 2003-265592	20030821
	EP 1551551	A1	20050713	EP 2003-793282	20030821
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	CN 1678391	A	20051005	CN 2003-819939	20030821
	JP 2005536425	T	20051202	JP 2004-529844	20030821
	RU 2318595	C2	20080310	RU 2005-107802	20030821
	US 20050227865	A1	20051013	US 2005-523226	20050131
PRAI	US 2002-405221P	P	20020822		
	WO 2003-US26327	W	20030821		

OS CASREACT 140:219737

AB A crystalline α - chromium oxide where 0.05-2 atom % of the chromium atoms in the α - chromium oxide lattice are substituted by nickel atoms, and optionally, addnl. chromium atoms in the alpha-chromium oxide lattice are substituted by trivalent cobalt atoms (provided that the total amount of the nickel atoms and the trivalent cobalt atoms in the α - chromium oxide lattice is no more than 6 atom%) is disclosed. Also disclosed is a chromium-containing catalyst composition comprising as a chromium-containing component the crystalline substituted α - chromium oxide; and a method for preparing a composition comprising the crystalline substituted α -chromium oxide. The method comprises (a) co-precipitating a solid by adding ammonium hydroxide to an aqueous solution of a soluble divalent nickel salt, a soluble trivalent chromium salt, and optionally, a soluble divalent or trivalent cobalt salt, that contains at least three moles of nitrate per mol of chromium in the solution, has a nickel concentration 0.05-2 mol% of the total of nickel, chromium, and cobalt in the solution, and has a combined concentration of nickel and cobalt of no more than 6 mol% of the total of nickel, chromium, and cobalt in the solution; and after at least 3 mol of ammonium per mol of chromium has been added to the solution; (b) collecting the co-precipitated solid formed in (a); (c) drying the collected solid; and (d) calcining the dried solid. Also disclosed is a chromium-containing catalyst composition comprising a chromium-containing component prepared by treating said crystalline substituted -chromium oxide with a fluorinating agent; and a process for changing the fluorine distribution (i.e., content and/or arrangement) in a hydrocarbon or halogenated hydrocarbon in the presence of a catalyst. The process involves using as the catalyst a composition comprising the crystalline substituted alpha-chromium oxide and/or the treated substituted α - chromium

oxide.
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=>

---Logging off of STN---

=>

Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	39.11	39.74
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-4.00	-4.00

STN INTERNATIONAL LOGOFF AT 18:11:46 ON 04 JUN 2008